

Architecture and Engineering for a New Geologic Material Center in Eagle River - Phase 1	FY2009 Request:	\$1,500,000
	Reference No:	45255

AP/AL: Appropriation	Project Type: Renewal and Replacement
Category: Natural Resources	
Location: Anchorage Area-wide	Contact: Leta Simons
House District: Anchorage Area-wide (HD 17-32)	Contact Phone: (907)465-2400
Estimated Project Dates: 07/01/2008 - 06/30/2010	

Brief Summary and Statement of Need:

The Geologic Materials Center in Eagle River is the state's archive of geologic samples to help determine the potential for production of metals, minerals, and fuels on Alaska state land (AS 41.08.020). The current facility is outdated and inadequate for proper storage and access to valuable geologic information related to resource potential throughout the state. The Department of Transportation and Public Facilities, which in 2006 completed a Concept Study of a replacement facility for DGGS, estimated that architectural design and engineering for a new facility will cost approximately \$2,900,000. DGGS is separately pursuing funding for a new GMC through Congressional appropriation, industry, and other sources.

Funding:	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	Total
Gen Fund	\$1,500,000	\$1,700,000					\$3,200,000
Total:	\$1,500,000	\$1,700,000	\$0	\$0	\$0	\$0	\$3,200,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Additional Information / Prior Funding History:

SLA05/CH03\$100,000.00 Federally funded scoping study complete

Project Description/Justification:

The Geologic Materials Center (GMC) in Eagle River is the state's archive of geologic samples for supporting energy- and minerals-related exploration and development, which is a statutory responsibility of the Division of Geological and Geophysical Surveys (DGGS). This valuable geologic information, the product of hundreds of millions of dollars of exploration and production drilling throughout the state and offshore waters, is at risk of damage or loss under current facility conditions; the growing collection has far exceeded the available warehouse space. Continual growth of the collection is accommodated only by addition of unheated and unlighted 40-foot shipping containers, currently numbering 55. A very positive aspect of the center is that a constant influx of valuable new geologic material is received yearly and, despite its serious shortcomings, the center continues to accommodate a steady 450 - 500 visitations annually, mostly from energy and mineral-industry exploration companies. The growing collection is partially the result of state lease regulations that require certain geologic samples to be turned over to the state for safe keeping and to allow public access. The GMC also receives numerous donated collections from the private sector. Some of the larger donations have created severe space limitations, and are themselves at risk of damage or loss. The information gathered from these unique geologic samples is critical for facilitating a vibrant and competitive exploration industry as is strongly evident in the attached appendix of testimonials obtained from industry representatives who are active in resource development in Alaska.

The operating budget of the GMC is \$250,000 annually, and is primarily spent on repair, maintenance, and retrofit of the sorely inadequate facility. A new facility will allow the current operating budget to be redirected from retrofitting an aged conglomeration of buildings to upkeep of a modern, state-of-the-art facility. Although a new facility will not directly generate

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revenue for the state, it will allow for reasonable, timely access to geologic samples for technical analysis, thereby facilitating development of new oil, gas, and mineral exploration projects. In turn, these operations clearly have direct revenue-generating capabilities through lease royalties and taxes. Increased exploration and development also have dramatic effect on the private-sector job market. Improved access to the samples, and improved ability to analyze them, will create service-industry and consulting opportunities in the high-paying resource-development industry.

Industry and federal agencies have partially supported the planning process; matching funds will be requested to fund the cost of construction. The Division of Forestry has committed approximately 9.5 acres of vacant land adjacent to their maintenance facility in Eagle River for the purpose of constructing a new Geologic Materials Center. Showing state contribution of a land parcel and capital improvement funds for the architectural and engineering design phase of this project will provide clear evidence to both the industry and federal appropriators that Alaska is committed to the support of this facility for responsible resource exploration and development.

A recently completed concept study, performed for DGGs under direction of the Department of Transportation and Public Facilities (DOTPF), describes the need for the facility, presents a conceptual design and specifications, and estimates the costs for a new structure that would house the present collection, anticipated large donations from industry, and steady growth long into the future. The concept study estimates the cost of the proposed 114,830-square-foot facility to be about 30 million dollars. DOTPF estimated that the architecture and engineering design for this facility will cost \$2,900,000 in 2006 dollars. The concept study report is available on the DGGs/GMC Web site at

<http://www.dggs.dnr.state.ak.us/GeologicMaterialsCenter.htm>. The engineering design will be done in two phases, with Phase I involving securing of the land and detailing the Architecture and Engineering to the point of providing a realistic cost estimate that can be used in the bond and funding effort.

Why is this Project Needed Now?:

The current Geologic Materials Center has far outgrown its available space and no longer provides adequate permanent facilities for archiving, storing, and examining samples. Valuable geologic material is continually received at the facility and is currently being archived in fifty-five 8-foot by 40-foot metal shipping containers that have been retrofitted to accommodate the necessary shelving. These portable trailers are unheated, have no internal or natural lighting, and put the rock core samples at risk of moisture condensation and freeze-thaw cycles that could destroy their integrity. In addition, an exploration company that does not have its own archival core facility (currently only one company does), must take large sample collections off-site from GMC for interpretation and analysis to help identify possible exploration targets. This condition puts the samples at risk of loss or damage and is very unusual for a state that contains such overwhelming resource potential and focuses so much effort on natural resource development.

The Senators Stevens and Murkowski have expressed interest in supporting the construction of a new facility on the condition that the State of Alaska shows substantial contribution. At their invitation, DGGs will submit a federal appropriations request for half the cost of the proposed facility, or \$15 million, in FY2010. DGGs proposes that the in-kind contribution of state land for the building site, in combination with state funding of the architectural design phase, will prove our commitment to providing the best access possible to geologic information acquired in the best place to explore for natural resources in the nation.

Specific Spending Detail:

<u>LINE ITEM</u>	<u>DOLLAR AMOUNT</u>	<u>DESCRIPTION (text)</u>
Personal Services	\$ 90,000	Deputy Director and Administrative Manager; part time for administration
Travel	\$ 10,000	Estimated travel cost to meetings with DOTPF and contractor
Services	\$ 1,200,000	RSA to DOTPF for administration, subcontracts, design reviews, and contingencies
Capital Outlay	\$ 200,000	Land purchase from Mental Health

Project Support:

Supporters for this project include: Alaska Oil and Gas Conservation Commission: AOGA, Alaska Geologic Society; Alaska Miners Association; University of Alaska, numerous oil, gas, and mineral exploration and development companies. (PLEASE SEE APPENDIX A)

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Project Opposition:
none

Appendix A: Industry Testimonials concerning the Alaska Geologic Materials Center importance and utility for responsible resource development.

On my first trip to the GMC last year, I was welcomed and favorably impressed by John Reeder and his staff, who all seemed conscientious, organized and very eager to help. The following comments are not related to them or their work.

Regarding the physical plant of the GMC, I was stunned to see the core collection, from which Alaska's great oil and gas wealth has come, stored in approximately 20 trucking containers scattered across the grounds of a former fishery. At a glance, it all seemed make-shift. Access and retrieval of core from the containers had to be difficult, particularly in winter snow. Inside the main building, examination tables and user work space were in short supply and dark. The GMC's presentation doesn't befit its contents. More over, it speaks of lost opportunities to educate; not just geoscientists, but potentially school kids, the general public, perhaps even tourists, about the abundant natural resources of Alaska. Couldn't the strong (tourist) interest in the Trans Alaska Pipeline be broadened to include geology; the reservoir cores from which the oil has been produced?

To an oil company, evaluating the prospectivity of an area includes looking at what has been done there in the past; what wells have been drilled and what was learned from them. Cores from Cook Inlet wells have the potential to provide a needed core-to-log calibration in a basin with highly variable reservoirs. Having ready access to cores and core data aids both companies and Alaska by facilitating the subsurface evaluation process, not only now but in the future.

**Denise M. Stone
Exploration Advisor
Benchmark Oil and Gas**

"A comprehensive core and sample inventory, centralized in an accessible, state-of-the-art facility, would be an invaluable contribution to an oil and gas company's ability to evaluate an area's resource potential"

**Jeff Bever
Team Leader, Northern Exploration
North American Frontiers
Petro-Canada**

Drill core provides the most direct information on the third dimension and is an invaluable resource in interpreting geological history regardless of the application – mineral and energy resources development, construction, environmental or academic; like a great book, it should never be discarded.

**Rick Van Nieuwenhuyse
President and CEO
NovaGold Resources Inc.**

"The ability to catalog, inventory, recover and examine core and geologic data from past exploration projects in Alaska is of tremendous value to the minerals industry. Having this type of access will advance the exploration-discovery process and decreasing the time and expense required for the future development of new ore deposits. It is a program well worth while and should be pursued."

**Jeffrey A. Pontius
President and CEO
International Tower Hill Mines Ltd.**

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I have made use of the Alaska Geologic Materials Center many times while with ARCO, ConocoPhillips, the State DOG, and now with Chevron. The staff is very professional and has helped me find exactly what I needed, however, sometimes that

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involves a flashlight, a heater, a snow shovel, scissors, pliers, cold weather gloves, a mallet, cryptic notes from donators, or describing cores off the back of a four-wheeler due to space constraints. An upgrade to the facility is definitely needed. Perhaps facility upgrades could be modeled after the Calgary, Alberta core storage facility.

Core, slides, and rock donations by the many oil companies that have been bought up by others, or that have lost interest in the State, have been preserved at the Alaska Geologic Materials Center. This rock data cost a lot of money to collect, and it would have been a crime to have thrown it away. Luckily, we can still view the materials due to the foresight of the State and the donating companies. These materials are the only means to tie the well record to the rock and reservoir properties for many older wells which we still study. This is an invaluable resource and it needs to be preserved and made more accessible.

**David C. Shafer
Development Geologist Advisor
Chevron North America Exploration and Production**

Throughout most of my career I have relied on the GMC to conveniently and reliably archive geologic samples from across Alaska. The GMC not only enables me to archive and retrieve samples and data, but its existence ensures that the samples collected by many of us in the industry will remain available in the future for other researchers and explorationists. With the increased cost of exploration, it would be difficult to measure the value of the facility and its collection, but be sure that it will continue to appreciate.

**Jeff Foley
Senior Exploration Geologist,
Calista Corporation**

The Alaska Geologic Materials Center is an extremely valuable resource to the Alaska Oil and Gas Industry. It enables continual, unfettered access to rocks over time so that more sophisticated technologies can be employed on core that was acquired decades ago. Results from studies on GMC core can strongly influence exploration decisions. However, the GMC is grossly antiquated and this precludes efficient use of its resources. The GMC absolutely needs to be upgraded, both in terms of its physical plant and its online database capabilities. The industry would likely use the GMC more if the facility were more modern and internet-based. Shell supports the DNR in its effort to build a new core facility.

**Dr. Thomas Homza
Staff Geologist
Shell Exploration and Production Co.**

We have spent weeks trying to track down elusive core sheds and stashes that ranged from the rain forests of SE Alaska to the treeless tundra of the Seward Peninsula. The GMC core facility provides us with a central clearing house for invaluable data that is otherwise lost to the mineral industry. Expanding and improving the services of the GMC will insure that more exploration funds find their way to Alaska and that those funds are more wisely spent.

**Curtis Freeman
President
Avalon Development**

- FEX/Talisman is a new but active exploration company in Alaska - having first become involved in NPRA operations in 2004 through Total. Since then we have become an operator and up to this year (in conjunction with Petro-Canada) have completed four exploration wells in the Northwest NPR-A, conducted one DST, and acquired three proprietary 3D and one 2D seismic surveys. We have also been active in six recent BLM and State lease sales.
- To date we have visited the GMC approximately four to five times each year. John Reeder and his staff have always been most helpful during our visits and usually manage to fulfill most of our data requests. Obtaining samples or borrowing thin sections is more problematic - but I understand his concern about companies historically not returning material. We also contact John directly by phone or Email at various times regarding the availability of samples or associated reports. John is always very punctual in responding to our requests.

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- The isolated location of the GMC and the antiquated condition of the facility probably detracts from more frequent usage. By comparison with similar institutions elsewhere in the world this must rank as one of the poorest. The core viewing portion of the GMC is cluttered, dirty, cold, poorly lit, and ill-equipped. I am also concerned about confidentiality/security. It would be nice to have a confidential sample viewing room where it is possible to analyze material and openly discuss results without others being privy to what is being inspected. I have had an experience where I know our presence/inspection is not secure.
- Information identification in Alaska is a complex and disjointed labyrinth. We have discussed in the past the need for "one stop shopping" where core samples etc. can be accessed at the same time as the associated reports, photographs, descriptions, and logs. For companies visiting Alaska for a limited time and who own a less than complete database this would be much more efficient process.
- The AOGCC requirement of just having small core chips being submitted to the GMC needs to be reviewed. I understand why the big companies who have operated in the State for a long time like this arrangement and don't want to see it changed. Realistically, however, much of the critical information that can be obtained from core is lost by this process. In other States and Countries I believe a complete portion of the core must be provided to the governing agency (a one third portion of all North Sea cores for instance).

Access to critical data in Alaska is important to the State if it wants to attract and retain new exploration and production companies. At present the lack of available technical information is undoubtedly impeding interest and activity levels. The new EIC arrangement will ultimately help correct this - but new companies will need to wait eight to 10 years before this starts taking effect. In my opinion the State can't wait that long for increased activity. Being able to conduct regular lease sales, acquire new seismic data, and drill exploration wells is a whole other issue. As we have seen recently the exploration process is highly vulnerable to frivolous lawsuits despite a highly regulated, time consuming, and expensive process. This situation also has a huge impact on the attractiveness of Alaska.

**Richard Garrard
Exploration Manager
FEX L. P.**
